

**VA Water Quality Standards Triennial Review
Ad Hoc Advisory Committee (reconvened)**

April 29, 2009

1:00 PM

DEQ Piedmont Regional Office Training Room
4949-A Cox Road, Glen Allen, VA
(804) 527-5020

Draft Agenda

- I. Welcome & Introductions
- II. Potential for recalculation of the cyanide water quality criteria for the protection of aquatic life for cyanide
 - a. Brief review of “Scientific Review of Cyanide Ecotoxicology and Evaluation of Ambient Water Quality Criteria”; Final Report” to Water Environment Research Foundation 2007
 - b. Comparison to EPA’s criteria
 - c. Discussion
- III. Potential for recalculation of the cadmium water quality criteria for the protection of aquatic life.
 - a. Brief review of “Addendum to U.S. EPA cadmium water quality criteria document-technical review and update” by Chadwick Ecological Consultants, Inc.
 - b. Brief review of “Cadmium risks to freshwater life, derivation and validation of low-effect criteria values using laboratory and field studies” by USGS
 - c. Comparison to EPA’s criteria
 - d. Discussion
- IV. Brief introduction of topics for the May meeting;
Potential recalculation of criteria for ammonia and copper to account for recent toxicity information on threatened and endangered species of freshwater mussels

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Summary of Six Issues

1. **Ammonia:** New toxicity studies on early life stages of freshwater mussels have demonstrated adverse effects at concentrations lower than the criteria levels.
2. **Copper:** New toxicity studies on early life stages of some species of freshwater mussels have demonstrated adverse effects at concentrations lower than the levels of copper allowed for by the current water quality criteria.
3. **Cadmium:** Two new recalculated criteria documents are available. One proposal titled “Addendum to the U.S. EPA Cadmium Water Quality Criteria Document - Technical Review and Criteria Update” (dated 2004) produced by Chadwick Ecological Consultants, Inc on behalf of the Association of Metropolitan Sewerage Agencies (AMSA). Also, a more recent attempt to recalculate the cadmium criteria has been published by the U.S. Geological Survey (USGS), titled; “Cadmium Risks to Freshwater Life: Derivation and Validation of Low-Effect Criteria Values Using Laboratory and Field Studies”, December 2006.
4. **Cyanide:** VAMWA has requested that DEQ recalculate the WQC for cyanide based on a report “Scientific Review of Cyanide Ecotoxicology and Evaluation of Ambient Water Quality Criteria: Final Report” (January 2007) produced on behalf of the Water Environment Research Foundation (WERF).
5. **Lead:** This issue involves proper conversion factor to apply to the Virginia aquatic life criteria for lead to convert the criteria concentrations to dissolved concentrations. Virginia recalculated the WQC for lead in 1998-1999 after literature review and using updated database. The basis for the VA 1999 WQC for lead is different than EPA’s 1985 WQC.
6. **Mixing Zone Prohibitions:** This issue involves the potential prohibition of mixing zones for persistent bioaccumulative substances for new or expanded dischargers.